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EXAMINER

LEE, CHEUKFAN

ART UNIT

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/605,164	Applicant(s) HSU ET AL.	
	Examiner Cheukfan Lee	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1 and 3-22 are pending. Claims 1, 12 and 19 are independent.
 2. The indicated allowability of claims 1 and 3-22 is withdrawn in view of the newly discovered reference(s) to Fujii et al. (U.S. Patent No. 4,444,488). Rejections based on the newly cited reference(s) follow.
 3. Claims 5 and 6 are objected to because of the following:

In claim 5, it is unclear whether "a reflecting mirror supporting holder" and "a clip" are referring to "a reflecting mirror supporting holder" and "one clip" or "at least one clip" of lines 7-8 of claim 1.

Claims 6 and 7 are objected to as being dependent on objected claim 5.
 4. The specification is objected to as being lack of antecedent basis according 37 CFR § 1.75(d)(1). Although it seems that original application is an English translation of a foreign application, Applicant is reminded that the specification should not be amended to the point that it introduces new matter. The examiner may (only may) accept an amendment to the specification if "rigid" is added to the specification to modify the "reflecting mirror supporting holder". That's only because technically, the optical path length may change if the mirror supporting holder is not substantially "rigid", which may result in an out-of-focus image.
- Claim 12 recites on line 3 "a rigid reflecting mirror supporting holder". However, the word "rigid" is not found in the specification.

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3-7, 12, 17-17, 19, 20, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Fujii et al. (U.S. Patent No. 4,444,488).

Regarding claim 1, Applicant's admitted prior art optical scanning module (Figs. 1, 2A and 2B, paragraph 0006) comprises an optical scanning module suitable for scanning a document, comprising an outer cover (110) having an opening (Fig. 1), a plurality of fixing elements (mirror supporting holders 122 and clips 124) disposed on an inner wall of the outer cover (110), a plurality of reflecting mirrors (130) disposed within the outer cover by using the fixing elements (mirror supporting holders 122 and clips 124), wherein each of the fixing elements comprises a reflecting mirror supporting holder (122) and a clip (124) for clipping one of the reflecting mirrors (130) to the corresponding mirror supporting holder (122), a lens (150) disposed within the outer cover (110), an image capturing device (160) disposed within the outer cover (110), and a light source (170) disposed on the outer cover (110), wherein a light emitted by the light source (170) is reflected by the document (50), and the reflected light is sequentially transmitted to the reflecting mirrors (130), the lens (150) and the image capturing device (160).

Applicant's prior art scanning module does not comprise a buffer pad disposed in between each clip (124) and the corresponding mirror (130) so that the clip (130) does not directly contact the mirror reflecting surface as claimed.

Fujii et al. discloses a scanning section of a copying apparatus, the scanning section comprising a plurality of reflecting mirrors (5, 6), a plurality of fixing elements (a plurality of parts of mirror supporting member 20 and mirror holders 21), and a buffer pad (mirror pad 22 made of an elastic material such as a rubber) disposed in between each mirror holder (21) (which corresponds to a clip 124 of Applicant's admitted prior art) and the corresponding mirror (5 or 6) so that the mirror holder (21) does not directly contact the mirror reflecting surface (Fig. 4, col. 3, lines 1-19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Fujii et al. to employ a buffer pad (mirror pad) in between each clip (124) and the corresponding mirror (130) so that the clip (130) does not directly contact the mirror reflecting surface in order to protect the mirror reflecting surface.

Regarding claim 3, the clip (124) of Applicant's prior art has a crooked portion (124a) (Fig. 2B). Based on the discussion and reason of obviousness given for claim 1, one of ordinary skill in the art would have realized that the crooked portion (124a) of the clip (124) is for fastening the buffer pad discussed for claim 1.

Regarding claim 4, Applicant's reflecting mirror supporting holder (122) is manufactured as an integral unit on the inner wall of the outer cover (110) (see Applicant's specification, paragraph 0006, the last three lines).

Regarding claim 5, each of the fixing elements (mirror support holders 122 and clips 124) comprises the reflecting mirror supporting holder (122) and the clip (124) disposed on the reflecting mirror supporting holder (122) for clipping the corresponding one of the reflecting mirrors and corresponding one of the mirror supporting holders (122). Based on the discussion and reason of obviousness given above for claim 1, one of ordinary skill in the art would have realized that each clip (124) is for clipping the corresponding mirror (130) and the corresponding buffer pad together with the corresponding reflecting mirror supporting holder (122).

Regarding claims 6 and 7, see discussions for claims 3 and 4, respectively, for claiming the same limitations.

Claim 12 is rejected as being a method claim corresponding to apparatus claim 1. Further, with regard to the claimed "rigid reflecting mirror supporting holder", the reflecting mirror supporting holder (122) of Applicant's admitted prior art (Fig. 1) is inherently rigid because if it is not, the optical path length changes due to the movement of the mirrors, even if the movement is small, which may result in an out-of-focus image. Furthermore, the claimed "mounting clip" corresponds to the clip discussed for claim 1.

Regarding claim 14, Applicant's admitted prior art does not teach that the clip(s) (124) includes a recess for locating a buffer pad. Based on the discussion and reason of obviousness given for claim 12 (see those for claim 11), one of ordinary skill in the art would have realized that shaping the clip (124) to include a recess not only enable the clip to hold the buffer pad against the mirror (130) but also enables the clip to retain the buffer pad in position, eliminating the need for pad securing means such as adhesive material. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the clip of Applicant's prior art in view of Fujii et al. with a recess to retain the buffer pad in position.

Regarding claim 15, see discussion for claims 3 and 6.

Regarding claim 16, Applicant's admitted prior art does not teach that the mirror supporting holder (122) and the clip (124) are integrally formed on an interior wall of the optical scanning module. However, one of ordinary skill in the art would have realized the advantage of integrally forming the holder (122) and the clip (124) to reduce the number of movable or loose parts in the scanning module or to prevent the clip from moving relative to the mirror supporting holder. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the reflecting mirror supporting holder and the clip of Applicant's prior art in view of Fujii et al. integrally formed on an interior wall of the optical scanning module in order to reduce the number

of movable or loose parts in the scanning module or to prevent the clip from moving relative to the mirror supporting holder.

Regarding claim 17, the buffer pads (22 in Fig. 4 of Fujii et al.) are made of elastic material (Fujii et al., col. 3, lines 1-5).

Regarding claim 19, the optical scanning module discussed for claim 1 meets the claimed optical scanning module. Please refer to the discussion for claim 1. The claimed "mounting means" and buffer means" correspond to the "fixing element" and "buffer pad" of claim 1.

Regarding claim 20, the buffer pads (22 in Fig. 4) of Fujii et al. are made of an elastic material (col. 3, lines 1-5).

For claim 22, see discussion for claim 14.

7. Claims 8-11, 13, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art in view of Fujii et al. (U.S. Patent No. 4,444,488) as applied to claims 1, 12, 17, and 19 above, and further in view of well known art.

The optical scanning module of Applicant's prior art in view of Fujii et al. is discussed above for claim 1 and corresponding method claim 12.

Regarding claim 8, Fujii et al. discloses that the buffer pads (22 in Fig. 4) are made of an elastic material, and rubber is employed as the elastic material in the exemplary embodiment (col. 3, lines 1-5). Although Fujii et al. does not specifically disclose other elastic material such as silicone or sponge, the examiner took Official Notice of the fact that silicone and sponge are two kinds of inexpensive, protective material for pads. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ either a silicone or a sponge as the protective material of the buffer pads.

Regarding claim 9, Applicant's prior art scanning module (Fig. 1) comprises an image capturing device (160). Applicant does not disclose a charge-coupled device (CCD). However, the examiner took Official Notice of the fact that employing a CCD as an image capturing device to obtain relatively high quality image data is a well known concept in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a CCD as the image capturing device to obtain high quality image data.

Regarding claim 10, Applicant's prior art does not specify the type of light source (170) (Fig. 1, paragraph 0006). The light source (170) shown in Fig. 1 has a tube shape, which is the shape of a cold cathode fluorescent lamp (CCFL). The examiner took Official Notice of the fact that employ a CCFL as a light source in a scanning

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module is not a novel but well known concept of providing adequate amount of light for illuminating an original. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the well known concept to employ a CCFL as the light source in the scanning module of Applicant's prior art in view of Fujii et al. to provide adequate amount of light for illuminating the original.

Regarding claim 11, Applicant's prior art does not specify the type of light source (170) (Fig. 1, paragraph 0006). Although Applicant's prior art does not teach that the light source (170) comprises a light emitting diode (LED) array, the examiner took Official Notice of the fact that employ an LED array as a light source in a scanning module is not a novel but well known concept of providing a uniform light output for illuminating an original and saving energy since LED arrays are low-energy consuming light sources. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the well known concept to employ an LED array as the light source in the scanning module of Applicant's prior art in view of Fujii et al. to provide a uniform light output and save energy.

Regarding claim 13, Fujii et al. does not disclose adhering the buffer pad (mirror pad 22 in Fig. 4) in position. However, the examiner took Official Notice of the fact that adhering the buffer pad with an adhesive to secure the position of the pad is a simple way of securing the pad in position. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adhere the buffer pad of

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Applicant's prior art in view of Fujii et al. to the mounting clip (124 of Applicant's prior art) in order to simplify the buffer pad securing process.

Regarding claim 18, see discussion for claim 8 above.

For claim 21, see discussion for claim 8.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheukfan Lee/
Primary Examiner, Art Unit 2625